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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,866	01/05/2001	Andreas Weigl	10191/1657	3677

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EXAMINER	
KADING, JOSHUA A	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/755,866	WEIGL ET AL.
	Examiner	Art Unit
	Joshua Kading	2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6,8 and 10* is/are rejected.

7)☒ Claim(s) *4,5,7, and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 10 is objected to because of the following informalities:

Claim 10 recites "an arrangement for causing" at the beginning of each limitation of the claim. It is suggested applicant amend the beginning of each limitation of claim 10 to read as follows --a means for causing--. The language is more consistent and clear for a 'means plus function' type of claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ying (U.S. Patent 6,061,600) in view of Paratore et al. (U.S. 5,666,358).

Regarding claim 1, Ying discloses "a method for an exchange of data in messages between at least two users connected by a bus system, each one of the at least two users including at least one of a predefinable timing mark and an ascertainable timing mark, comprising the steps of:

causing the at least two users to transmit via the bus system messages including the data (col. 7, lines 31-35 where it is implied that the data bus will be carrying data messages from the master and slave nodes, i.e. the users);

if the at least one of the predefinable timing mark and the ascertainable timing mark of a second one of the at least two users is reached without the first reference message of the first one of the at least two users reaching the second one of the at least two users (col. 7, lines 35-39 where the wait period acts as an ascertainable timing mark of the slave node (second user) that is reached if the slave node does not receive a signal from the master node (first user)), causing the second one of the at least two users to take over the function of timer by transmitting a second reference message with a second time information via the bus system (col. 7, lines 39-42 where it is implied that by taking over the function of the master node the slave node is capable of performing all master node tasks, including the sending of time information to other nodes of the bus system)."

However, Ying lacks what Paratore discloses, "causing a first one of the at least two users, in a function as timer, to control the messages as a function of time such that the first one of the at least two users repeatedly transmits a first reference message including a first time information regarding a time base of the first one of the at least two users, via the bus system at a specifiable time interval (col. 2, lines 15-19 where the reference time stamp sent by the master node is the time base of the first user)".

It would have been obvious to one with ordinary skill in the art at the time of invention to include the sending of the time base with the rest of the method for the

purpose of synchronizing the master node with the slave nodes (Paratore, col. 2, lines 19-24). The motivation for synchronizing the master node with the slave nodes is so that they may continue to communicate with each other over the bus system.

Regarding claim 2, Ying and Paratore disclose the method of claim 1. However, Paratore lacks what Ying further disclose, "the steps of providing each one of the at least two users as timers (col. 7, lines 35-39 where the fact that the master node periodically sends out signals to the slave nodes is indicative of the master node acting as a timer (or at least the periodicity of the signals being sent out act as a timer) and where the wait period of the slave node allows the slave node to function as a timer); and causing the first one of the at least two users and the second one of the at least two users to transmit via the bus system the first reference message with the first time information and the second reference message with the second time information when the at least one of the predefinable timing mark and the ascertainable timing mark of any of the at least two users has been reached without a receipt of a corresponding one of the first reference message and the second reference message (col. 7, lines 35-42 where it is implied that by taking over the function of the master node the slave node is capable of performing all master node tasks, including the sending of time information to other nodes of the bus system and since the "new" acting master node must be guarded against in case of its failure, there are further slave nodes ready to take over as master node in the event of the "new" master node's failure)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the further step of

causing a user to take over when after a time limit has been reached with the method of claim 1 for the same reasons and motivation as in claim 1.

Regarding claim 3, Ying and Paratore disclose the method of claim 1. However, Paratore lacks what Ying further discloses, "subdividing the specifiable time interval into timing windows of a specifiable length (col. 8, lines 30-33 where by having the bus time-multiplexed each node is allotted a window length of time to use the bus); and transmitting the messages including the data in the timing windows (col. 8, lines 30-33 it is implied that the user would use the bus for transmitting the messages during its allotted time window)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the timing window with the method of claim 1 for the same reasons and motivation as in claim 1.

Regarding claim 6, Ying and Paratore disclose the method of claim 1. However, Paratore lacks what Ying further discloses, "allocating a priority with respect to the function as timer to those of the at least two users capable of being used as a timer (col. 7 , lines 45-49)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the priority allocating with the method of claim 1 so that only one slave node at a time will vie for control if there is a master node failure (Ying, col. 7, lines 39-49 where it is suggested that the prioritizing is a way of selecting which nodes will take over when). The motivation for the prioritizing is that it is clear which node will

take over in case of failure and by doing so will not waste resources or time if two nodes were to try take control at the same time.

Regarding claim 8, Ying and Paratore disclose the method of claim 3. However, Paratore lacks what Ying further discloses, "the step of cyclically transmitting the messages including the data in the timing windows (col. 8, lines 30-33 whereby time multiplexing means that the each node gets a certain portion of time over a total time period and once the end of the period is reached, the cycle starts over again with node 1)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the cyclically transmitting with the method of claim 3 for the same reasons and motivation as in claim 3.

Regarding claim 10, Ying discloses "a device for an exchange of data in messages between at least two users connected by a bus system, each one of the at least two users including at least one of a predefinable timing mark and an ascertainable timing mark, comprising the steps of:

a means for causing the at least two users to transmit via the bus system messages including the data (col. 7, lines 31-35 where it is implied that the data bus will be carrying data messages from the master and slave nodes, i.e. the users);

a means for causing, if the at least one of the predefinable timing mark and the ascertainable timing mark of a second one of the at least two users is reached without the first reference message of the first one of the at least two users reaching the second

one of the at least two users (col. 7, lines 35-39 where the wait period acts as an ascertainable timing mark of the slave node (second user) that is reached if the slave node does not receive a signal from the master node (first user)), causing the second one of the at least two users to take over the function of timer by transmitting a second reference message with a second time information via the bus system (col. 7, lines 39-42 where it is implied that by taking over the function of the master node the slave node is capable of performing all master node tasks, including the sending of time information to other nodes of the bus system)."

However, Ying lacks what Paratore discloses, "means for causing a first one of the at least two users, in a function as timer, to control the messages as a function of time such that the first one of the at least two users repeatedly transmits a first reference message including a first time information regarding a time base of the first one of the at least two users, via the bus system at a specifiable time interval (col. 2, lines 15-19 where the reference time stamp sent by the master node is the time base of the first user)".

It would have been obvious to one with ordinary skill in the art at the time of invention to include the sending of the time base with the rest of the device for the purpose of synchronizing the master node with the slave nodes (Paratore, col. 2, lines 19-24). The motivation for synchronizing the master node with the slave nodes is so that they may continue to communicate with each other over the bus system.

Allowable Subject Matter

Claims 4, 5, 7, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (703) 305-0342. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joshua Kading
Examiner
Art Unit 2661

June 14, 2004

KENNETH VANDERPUYE
PRIMARY EXAMINER